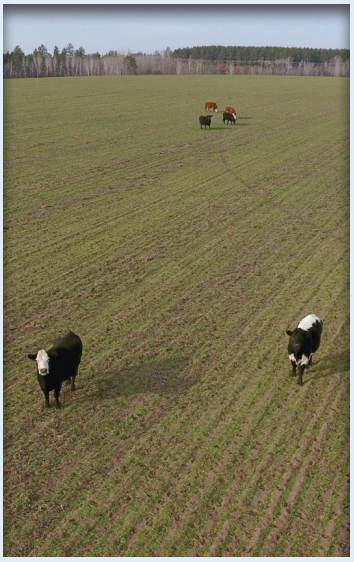
ECONOMIC CONSIDERATIONS FOR ADDING COVER CROPS AS AGRONOMIC PRACTICE

Executive Summary

MAY | 2024



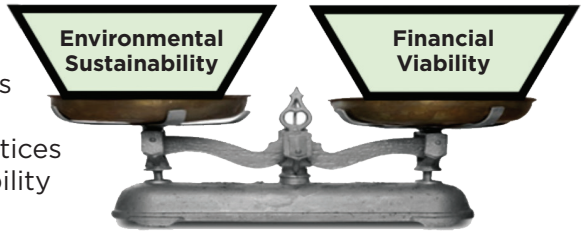
MINNESOTA STATE
Agricultural Centers of Excellence

FBM
EST 1953
FARM BUSINESS MANAGEMENT

MINNESOTA STATE
Agricultural Centers of Excellence

EXPLORING THE IMPACT OF SELECTED PRACTICES ON FARM ECONOMICS

There are costs and benefits from implementing farm practices that exceed normal practices to provide greater support in environmental sustainability. Decisions to implement new practices are impacted by the balancing act of Environmental Sustainability and Financial Viability, as shown to the right.



BALANCING ACT

COVER CROP ANALYSIS – AN EXPANDED VIEW

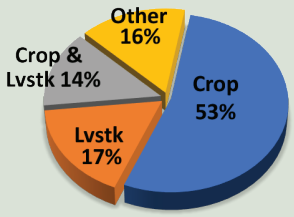
This is the second year of cover crop data provided by the Minnesota State Farm Business Management Database and the University of Minnesota Southwest MN Farm Business Management Association Database. This Executive Summary is based on 2023 data from the cover crop cohort, farmers that have incorporated cover crops into their management practices and have followed established procedures in recording those practices. For consistency, a format similar to the first year is being used to provide a broad overview of selected financial and production practices related to the use of cover crops. This report is not intended to suggest any long-term trend is represented by this data.

WHAT'S NEW

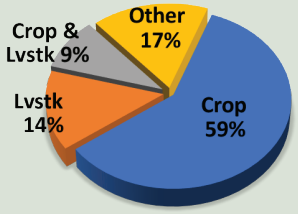
For this 2023 crop year, cover crop information was also submitted by farmers who participate in the Wisconsin Farm Business and Production Management program (FBPM) through the Wisconsin Technical College System. Data from 12 farms in the program has been shared on page 6 in this report.

Demographics	2022		2023	
	Cover Crop Cohort	Database Avg.	Cover Crop Cohort	Database Avg.
Number of Farms	121	2154	129	2317
Total Crop Acres per Farm	770	808	832	800
Age of Operator	46.9	47.2	47.4	47.4
Years Farming	22.8	23.0	23.6	22.8
% Beginning Farmers (<10 yrs)	25%	29%	21%	30%

Type of Farm - Cover Crop



Type of Farm - Average



DEMOGRAPHICS

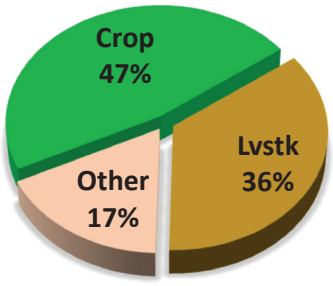
The data for the State Average comes from the 2,317 farms included in the State FBM Database for the 2023 crop year. The data for the Cover Crop (CC) Cohort comes from 129 farms in the two programs noted above. The table to the left has two years of general demographic data from these two groups. This data indicates that farm size in acres, age and experience of the farmer is very similar. The two pie charts show that the type of farm is also similar but the Cover Crop Cohort has slightly more livestock farms in the group while the State Database Average has slightly more crop farms.

FINANCIALS AT-A-GLANCE

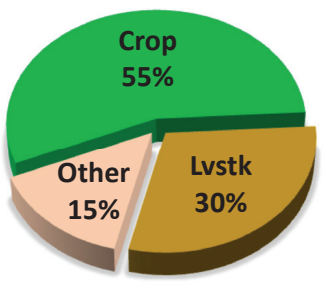
Several factors were selected to provide a brief financial overview for this report. The sources of income noted in the two charts indicates that the Cover Crop Cohort had 6% more gross revenue from livestock and 8% less income from crops.

Based on the 2023 income and expense data In the Income Statement table, the State Average and the Cover Crop Cohort have very comparable numbers. The Cover Crop Cohort has a median net farm income

Income Source - Cover Crop



Income Source - Average



Financials At-A-Glance continued

level that is significantly above the State Database Average, suggesting the middle-income Cover Crop Cohort farmers had a more profitable year. Net farm income levels were down significantly from 2022. Net cash income was steady but major reductions in the amount and value of farm inventory severely impacted farm profits.

Income Statement	2022		2023	
	Cover Crop Cohort	Database Avg.	Cover Crop Cohort	Database Avg.
Gross Cash Farm Income	$1,003,464	$1,092,140	$1,118,065	$1,099,812
Crop Sales	*$505,024*	*$607,954*	*$527,118*	*$611,435*
Livestock Sales	*$331,785*	*$334,348*	*$396,797*	*$325,729*
Other Income	*$166,655*	$149,838	*$194,150*	*$162,649*
Total Cash Farm Expense	$808,831	$893,176	$928,556	$904,500
Net Cash Income	$194,633	$198,964	$189,509	$195,312
Inv Chg, Deprec, Cap Sales	$86,777	$112,288	-$97,616	-$101,376
Average Net Farm Income	$281,410	$311,252	$91,893	$93,936
Median Net Farm Income	$171,681	$176,616	$64,859	$44,596

Financial Ratios

The financial ratios listed here show that reduced farm profit has a major impact on Working Capital and Debt Coverage (ability to pay off debt). The Operating Expense Ratio illustrates the impact of rising input prices on the ability to pay expenses. Operating expense was about 67 cents for every dollar of revenue in 2022 but increased to about 80 cents out of every dollar in 2023.

Selected Measures	2022		2023	
	Cover Crop Cohort	Database Avg.	Cover Crop Cohort	Database Avg.
Working Capital as % of Exp.	76.4%	68.1%	54.4%	51.1%
Farm Debt to Asset Ratio	43.0%	43.0%	45.0%	44.0%
Debt Coverage Ratio	3.26	3.35	1.35	1.33
Operating Expense Ratio	66.8%	67.5%	80.5%	81.3%

COVER CROP ENTERPRISE TABLES

Four enterprises have been selected to provide data for the 2023 crop year. Corn and Soybeans are compared to southern MN data (page 3) and to the northern MN data (page 4). Corn Silage and Spring Wheat are compared to statewide data (page 5). Each table includes five (5) columns of data, which are explained below:

Column 1 – State FBM Database Average, grown with no cover crop: This column is the average of all fields for the crop in the given area that were not grown following a cover crop. This column provides an economic comparison to the combined acres shown in column 5.

Column 2 – Cover Crop Cohort, grown with no cover crop: This column includes enterprises planted by farmers in the cover crop group, but these acres did not have cover crops. This column provides a comparison to the same crop when grown after a cover crop, as in Column 3. This column is highlighted in blue.

Columns 3-5 show data for the actual cover crop acres, including the main crop, the cover crop, and the combination of the two.

Column 3 – Crop Grown after Cover Crop: This is the traditional crop that was planted after a cover crop. The costs in this column do not include the cost of the cover crop in column 4. This column is highlighted in green.

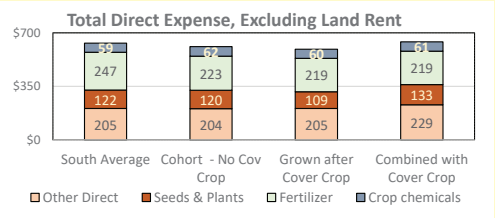
Column 4 – Cover Crop Only: This is the average of the cover crop acres planted. No production data is listed, as various cover crop types were planted. Any cost-share funding is included as other income. The gross return includes production returns, cost-share and other cover crop program payments. This column is highlighted in green.

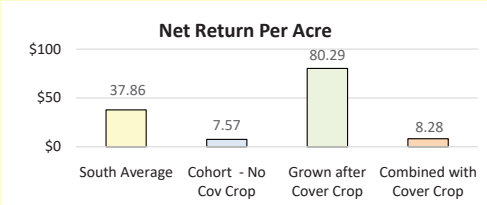
Column 5 – This column combines Crop Grown after Cover Crop (col. 3) and the Cover Crop (col. 4) – This is the total income and expense for columns 3 and 4. No production information is detailed here because two distinct types of crop enterprises were combined. This column is highlighted in tan.

SOUTHERN MINNESOTA CORN AND SOYBEAN DATA

Corn Enterprise Analysis on Rented Acres
Southern Minnesota Farm Business Management Data

	Southern MN Database Average	Southern Minnesota Cover Crop Cohort			
		Fields with Corn	*Fields planted to cover crops followed by: Corn*		
	No Cover Crop	**No Cover Crop**	***Grown after Cover Crop***	***Cover Crop Enterprise***	***Combined with Cover Crop***
Number of farms	1,018	62	25	25	25
Yield per acre	202.94	185.46	184.32	-	-
Value per bu.	4.86	4.72	5.06	-	-
Crop insurance per acre	60.45	86.47	103.68	-	103.68
Other crop income per acre	1.66	5.27	5.68	3.57	9.25
Gross return per acre	1,052.41	970.22	1,041.94	3.87	1,045.81
Direct Expenses					
Seeds & Plants	121.69	120.29	108.86	23.89	132.75
Fertilizer	246.58	223.15	218.59	-	218.59
Crop chemicals	58.67	62.42	60.24	0.79	61.03
Crop insurance	32.08	32.89	36.51	-	36.51
Fuel & oil	35.54	29.53	27.16	5.95	33.11
Repairs	64.54	60.02	49.91	11.92	61.83
Custom hire	18.37	27.50	29.84	2.39	32.23
Land Rent	262.52	244.25	254.71	-	254.71
Total direct expenses per acre	894.21	853.96	847.80	48.16	895.96
Return over direct exp per acre	158.20	116.26	194.14	-44.29	149.85
Total overhead expenses per acre	120.33	108.69	113.85	27.73	141.57
Total dir & ovhd expenses per acre	1,014.54	962.65	961.64	75.89	1,037.53
Net return per acre	**37.86**	**7.57**	**80.29**	**-72.01**	**8.28**
Government payments	-	-	-	-	-
Net return over lbr & mgt	-21.04	-47.11	25.74	-85.40	-59.66
Cost of Production with labor & mgmt	4.96	4.97	4.92	-	5.38
Machinery cost per acre	186.33	191.09	177.73	33.08	210.81





Corn:

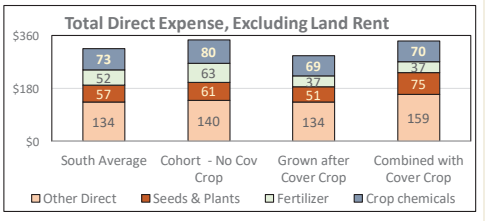
When comparing (Col. 1) and (Col. 5), gross return was very similar; while direct & overhead expense were slightly higher for the Combined with Cover Crop fields, as would be expected. The added costs resulted in (Col. 5) having a lower net return. When comparing only fields grown by the cohort, the Grown after Cover Crop fields (Col. 3) had a higher gross return and net return than fields grown with No Cover Crop (Col. 2). The Cover Crop Enterprise (Col. 4) data indicates a dir & ovhd expense of $75.89/acre.

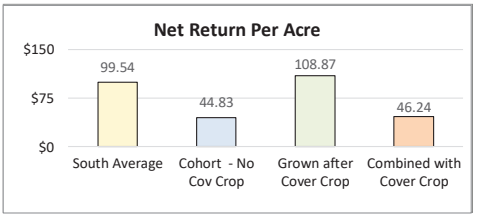
Soybeans:

When comparing (Col. 1) and (Col. 5), gross return was very similar; while direct & overhead expense were slightly higher for the Combined with Cover Crop fields, as would be expected. The added costs resulted in (Col. 5) having a lower net return. When comparing only fields grown by the cohort, the Grown after Cover Crop fields (Col. 3) had a higher gross return and net return than fields grown with No Cover Crop (Col. 2). The Cover Crop Enterprise (Col. 4) data indicates a dir & ovhd expense of $77.98/acre.

Soybean Enterprise Analysis on Rented Acres
Southern Minnesota Farm Business Management Data

	Southern MN Database Average	Southern Minnesota Cover Crop Cohort			
		Fields with Soybeans	*Fields planted to cover crops followed by: Soybeans*		
	No Cover Crop	**No Cover Crop**	***Grown after Cover Crop***	***Cover Crop Enterprise***	***Combined with Cover Crop***
Number of farms	927	53	30	30	30
Yield per acre	56.93	53.61	53.54	-	-
Value per bu.	12.78	12.70	13.12	-	-
Crop insurance per acre	23.03	23.11	16.10	-	16.10
Other crop income per acre	1.19	4.62	5.29	11.77	17.06
Gross return per acre	752.54	708.20	723.82	15.35	739.17
Direct Expenses					
Seeds & Plants	57.35	61.45	51.28	24.03	75.31
Fertilizer	51.86	63.48	37.00	0.19	37.19
Crop chemicals	72.67	80.28	69.36	0.41	69.77
Crop insurance	29.69	28.45	35.46	-	35.46
Fuel & oil	22.15	18.63	18.43	6.16	24.59
Repairs	40.86	35.08	34.25	12.39	46.64
Custom hire	14.94	26.92	22.92	2.39	25.31
Land Rent	261.65	243.21	242.88	-	242.88
Total direct expenses per acre	578.01	588.46	534.92	49.36	584.28
Return over direct exp per acre	174.53	119.74	188.90	-34.01	154.89
Total overhead expenses per acre	74.99	74.91	80.03	28.62	108.65
Total dir & ovhd expenses per acre	653.01	663.37	614.95	77.98	692.93
Net return per acre	**99.54**	**44.83**	**108.87**	**-62.63**	**46.24**
Government payments	-	-	-	-	-
Net return over lbr & mgt	60.93	3.40	71.21	-76.03	-4.82
Cost of Production with labor & mgmt	11.71	12.64	11.79	-	13.25
Machinery cost per acre	121.64	132.12	117.18	35.12	152.30

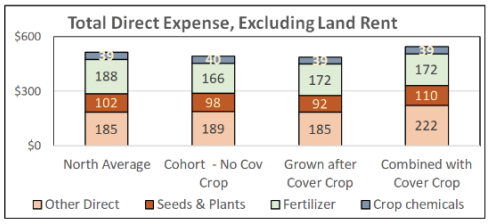


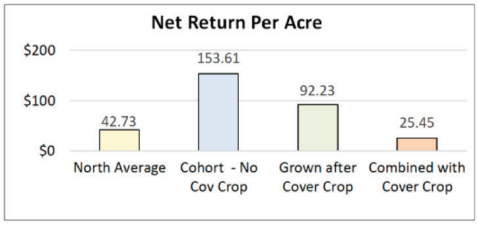


NORTHERN MINNESOTA CORN AND SOYBEAN DATA

Corn Enterprise Analysis (Owned and Rented Acres Combined)
Northern & Red River Valley Minnesota Farm Business Management Data

	Northern MN Database Average	Northern Minnesota Cover Crop Cohort			
		Fields with Corn	*Fields planted to cover crops followed by: Corn*		
	No Cover Crop	No Cover Crop	*Grown after Cover Crop*	*Cover Crop Enterprise*	*Combined with Cover Crop*
Number of farms	384	25	9	9	9
Yield per acre	162.02	156.81	149.78	-	-
Value per bu.	4.62	4.91	4.76	-	-
Crop insurance per acre	54.86	95.39	71.47	-	71.47
Other crop income per acre	3.09	5.62	0.25	10.76	11.01
Gross return per acre	810.95	894.65	788.77	10.76	799.53
Direct Expenses					
Seeds & Plants	101.84	98.19	92.05	17.85	109.91
Fertilizer	188.36	165.91	171.55	-	171.55
Crop chemicals	38.70	40.15	38.89	-	38.89
Crop insurance	27.01	34.69	30.61	-	30.61
Fuel & oil	37.51	41.32	31.16	8.49	39.65
Repairs	68.96	65.61	79.66	25.79	105.45
Custom hire	11.70	9.92	4.42	0.45	4.87
Total direct expenses per acre	629.30	627.54	591.58	55.30	646.88
Return over direct exp per acre	181.64	267.10	197.19	-44.54	152.65
Total overhead expenses per acre	138.91	113.50	104.96	22.24	127.20
Total dir & ovhd expenses per acre	768.22	741.04	696.54	77.55	774.09
Net return per acre	**42.73**	**153.61**	**92.23**	**-66.79**	**25.45**
Government payments	-	-	-	-	-
Net return over lbr & mgt	-10.81	109.42	34.72	-80.78	-46.06
Cost of Production with labor & mgmt	4.69	4.21	4.53	-	5.06
Machinery cost per acre	182.90	179.03	158.88	44.38	203.26
Land Cost *	142.68	149.32	120.83	-	-





Corn:

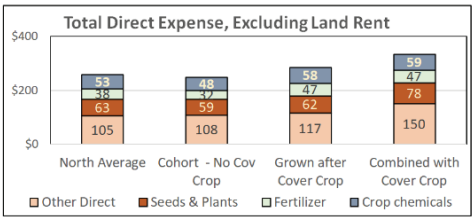
When comparing (Col. 1) and (Col. 5), gross return and net return were slightly higher for the Database Average fields, while dir & ovhd expenses were slightly lower. When comparing only fields grown by the cohort, the fields grown with No Cover Crop (Col. 2) had a higher gross and net return and higher expenses. Yield had an impact on the gross return comparisons, as did Value per Bu. The Cover Crop Enterprise (Col. 4) data indicates a dir & ovhd expense of $77.55/acre.

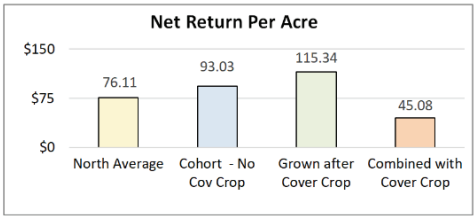
Soybeans:

When comparing (Col. 1) and (Col. 5), gross return and dir & ovhd expenses were significantly higher for the Combined with Cover Crop fields, while the net return was lower. All three factors were higher for the fields Grown after Cover Crop (Col. 3), compared to fields grown with No Cover Crop (Col. 2) and. Yield again had an impact on gross return comparisons, as did Value per Bu. The Cover Crop Enterprise (Col. 4) data indicates a dir & ovhd expense of $77.60/acre.

Soybean Enterprise Analysis (Owned and Rented Acres Combined)
Northern & Red River Valley Minnesota Farm Business Management Data

	Northern MN Database Average	Northern Minnesota Cover Crop Cohort			
		Fields with Soybeans	*Fields planted to cover crops followed by: Soybeans*		
	No Cover Crop	No Cover Crop	*Grown after Cover Crop*	*Cover Crop Enterprise*	*Combined with Cover Crop*
Number of farms	391	20	11	11	11
Yield per acre	39.86	38.83	42.09	-	-
Value per bu.	12.45	12.45	12.74	-	-
Crop insurance per acre	1.00	11.60	-	-	-
Other crop income per acre	4.08	4.41	15.07	5.45	20.52
Gross return per acre	517.92	524.83	580.71	7.34	588.04
Direct Expenses					
Seeds & Plants	62.65	59.13	62.11	15.54	77.65
Fertilizer	37.86	32.00	46.84	-	46.84
Crop chemicals	53.41	47.73	58.34	0.19	58.54
Crop insurance	-	1.56	-	-	-
Fuel & oil	21.55	23.83	17.28	6.14	23.42
Repairs	38.54	44.43	48.26	23.05	71.31
Custom hire	7.51	5.29	10.10	2.79	12.89
Total direct expenses per acre	356.69	369.05	368.40	48.96	417.37
Return over direct exp per acre	161.23	155.77	212.30	-41.62	170.68
Total overhead expenses per acre	85.12	62.74	96.97	28.63	125.60
Total dir & ovhd expenses per acre	441.81	431.79	465.37	77.60	542.96
Net return per acre	**76.11**	**93.03**	**115.34**	**-70.26**	**45.08**
Government payments	-	-	-	-	-
Net return over lbr & mgt	43.58	65.09	83.46	-83.29	0.17
Cost of Production with labor & mgmt	11.36	10.77	10.76	-	12.77
Machinery cost per acre	104.16	103.19	111.32	47.15	158.47
Land Cost *	118.27	137.11	118.77	-	-

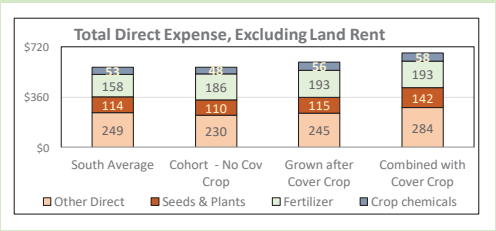


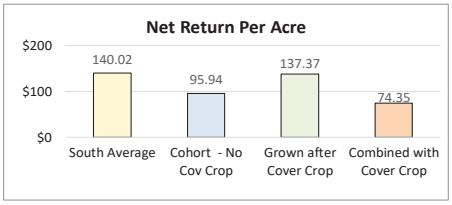


STATEWIDE CORN SILAGE AND SPRING WHEAT DATA

Corn Silage Enterprise Analysis (Owned and Rented Acres Combined)
Minnesota Farm Business Management Statewide Data

	FBM State Database Average	Minnesota Cover Crop Cohort			
		Fields with Corn Silage	*Fields planted to cover crops followed by: Corn Silage*		
	No Cover Crop	No Cover Crop	*Grown after Cover Crop*	*Cover Crop Enterprise*	*Combined with Cover Crop*
Number of farms	372	38	16	16	16
Yield per acre	19.34	19.42	17.93	-	-
Value per ton	44.47	42.26	45.24	-	-
Crop insurance per acre	132.50	138.29	223.32	-	222.43
Other crop income per acre	0.23	0.78	-	-	-
Gross return per acre	992.91	959.48	1,034.30	29.07	1,064.24
Direct Expenses					
Seeds & Plants	113.66	110.23	114.51	27.60	142.01
Fertilizer	158.38	185.88	193.13	-	192.89
Crop chemicals	53.42	48.02	55.63	2.81	58.44
Crop insurance	22.27	27.17	29.46	-	29.38
Fuel & oil	47.37	39.80	38.01	10.25	48.22
Repairs	70.35	52.10	50.96	13.85	65.10
Custom hire	77.84	69.98	95.39	7.28	102.53
Hired labor	4.61	1.90	0.61	-	0.61
Land Rent	129.21	105.37	112.27	-	111.82
Total direct expenses per acre	703.99	679.36	720.60	69.31	789.44
Return over direct exp per acre	288.91	280.11	313.70	-40.24	274.80
Total overhead expenses per acre	148.90	184.17	176.33	23.77	200.45
Total dir & ovhd expenses per acre	852.89	863.53	896.93	93.09	989.89
Net return per acre	**140.02**	**95.94**	**137.37**	**-64.02**	**74.35**
Government payments	-	-	-	-	-
Net return over lbr & mgt	96.57	55.00	92.46	-76.38	16.88
Cost of Production with labor & mgmt	39.48	39.43	40.08	-	44.05
Machinery cost per acre	254.88	236.34	234.88	44.63	279.64
Land Cost *	166.10	174.61	210.73	-	-





Corn Silage:

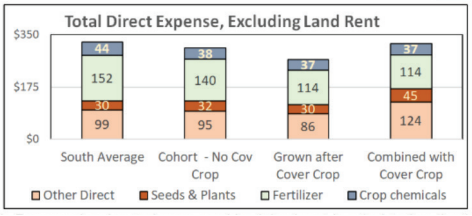
When comparing (Col. 1) and (Col. 5), gross return and dir & ovhd expenses were higher for the Combined with Cover Crop fields, while net return was lower. When comparing only fields grown by the cohort, the fields Grown after Cover Crop (Col. 2) had a higher gross and net return as well as higher expenses. Yield and price (value) had an impact on the gross return comparisons. The Cover Crop Enterprise (Col. 4) data indicates a dir & ovhd expense of $93.09/acre.

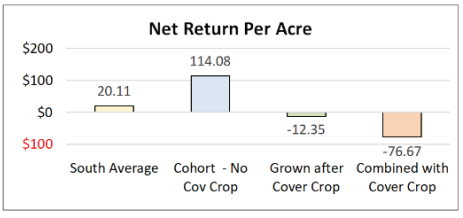
Spring Wheat:

When comparing (Col. 1) and (Col. 5), gross return, net return, and dir & ovhd expenses were significantly higher for the Database Average fields. Yield was the primary factor in that difference. The same was true when comparing only fields grown by the cohort, where (Col. 2) was higher than (Col. 3). Value per Bu. also had some influence when comparing these columns. The Cover Crop Enterprise (Col. 4) data indicates a dir & ovhd expense of $72.93/acre.

Spring Wheat Enterprise Analysis (Owned and Rented Acres Combined)
Minnesota Farm Business Management Statewide Data

	FBM State Database Average	Minnesota Cover Crop Cohort			
		Fields with Spring Wheat	*Fields planted to cover crops followed by: Spring Wheat*		
	No Cover Crop	No Cover Crop	*Grown after Cover Crop*	*Cover Crop Enterprise*	*Combined with Cover Crop*
Number of farms	248	13	6	6	6
Yield per acre	69.42	69.28	51.50	-	-
Value per bu.	7.27	7.77	7.25	-	-
Crop insurance per acre	9.09	6.02	7.31	-	7.31
Other crop income per acre	6.32	12.30	14.09	8.31	22.40
Gross return per acre	523.86	609.28	394.90	8.61	403.51
Direct Expenses					
Seeds & Plants	30.24	32.43	30.44	14.06	44.50
Fertilizer	152.06	140.02	113.93	-	113.93
Crop chemicals	43.93	38.49	37.03	-	37.03
Crop insurance	18.13	15.16	11.82	-	11.82
Fuel & oil	21.27	20.35	17.55	9.01	26.56
Repairs	37.55	41.64	37.66	27.23	64.89
Custom hire	7.64	5.21	4.11	-	4.11
Total direct expenses per acre	414.06	399.18	345.58	52.28	397.86
Return over direct exp per acre	109.80	210.11	49.32	-43.67	5.65
Total overhead expenses per acre	89.69	96.03	61.67	20.65	82.31
Total dir & ovhd expenses per acre	503.75	495.21	407.24	72.93	480.17
Net return per acre	**20.11**	**114.08**	**-12.35**	**-64.32**	**-76.67**
Government payments	-	-	-	-	-
Net return over lbr & mgt	-13.61	86.66	-44.66	-79.12	-123.78
Cost of Production with labor & mgmt	7.47	6.52	8.12	-	9.66
Machinery cost per acre	101.15	98.86	75.20	41.67	116.87
Land Cost *	109.63	128.17	93.29	-	-





WISCONSIN FBPM COVER CROP DATA – A COMPARISON

The information on this page is a "First Look" at a smaller cohort of farmers and is not intended to suggest that any long-term trend is represented by this data. There are 12 farms from Wisconsin who submitted 2023 whole farm financial and cover crop enterprise data for this comparison. WI instructors used the same procedures in recording cover crop practices, and the same data consistency and accuracy checking as MN instructors when collecting, analyzing, and reviewing the data before submission.

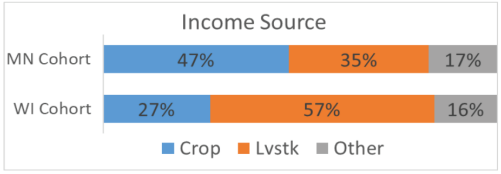
DEMOGRAPHICS AND FINANCIALS AT-A-GLANCE

A quick review of the demographic data suggests that the WI farms are slightly smaller in size and are owned by farmers with more farming experience.

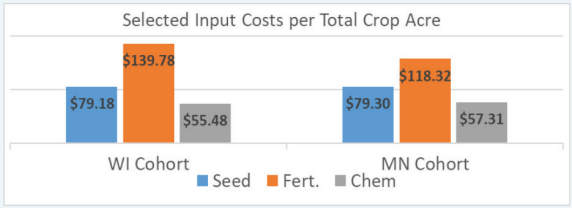
The Income Statement data shows that the gross cash income on the WI Cohort is slightly more than the MN Cohort and net farm income was significantly higher than the MN Cohort. The chart shows that the WI Cohort generates significantly more revenue from livestock. The selected Financial Standards Measures shows that the WI Cohort has a stronger Working Capital as a % of Expenses and Debt Coverage Ratio. The additional years of farming may have an impact here.

Income Statement & Financial Measures	2023	
	WI Cover Crop Cohort	**MN** Cover Crop Cohort
Gross Cash Farm Income	$1,244,008	$1,118,065
Gross Crop Income	*$336,972*	*$527,118*
Gross Livestock Income	*$707,451*	*$396,797*
Total Cash Farm Expense	$991,780	$928,556
Net Cash Income	$252,228	$189,509
Average Net Farm Income	$148,857	$91,893
Median Net Farm Income	$107,930	$64,859
Working Capital as % of Exp.	60%	54%
Debt Coverage Ratio	1.55	1.35

Demographics	2023	
	WI Cover Crop Cohort	**MN** Cover Crop Cohort
Number of Farms	12	129
Total Crop Acres per Farm	722	832
Age of Operator	46.0	47.4
Years Farming	26.2	23.6
% Beginning Farmers (<10 yrs)	17%	21%



Selected Costs	2023	
	WI Cover Crop Cohort	**MN** Cover Crop Cohort
Seed Cost / crop acre	$79.18	$79.30
Fertilizer Cost / crop acre	$139.78	$118.32
Chemical Cost / crop acre	$55.48	$57.31



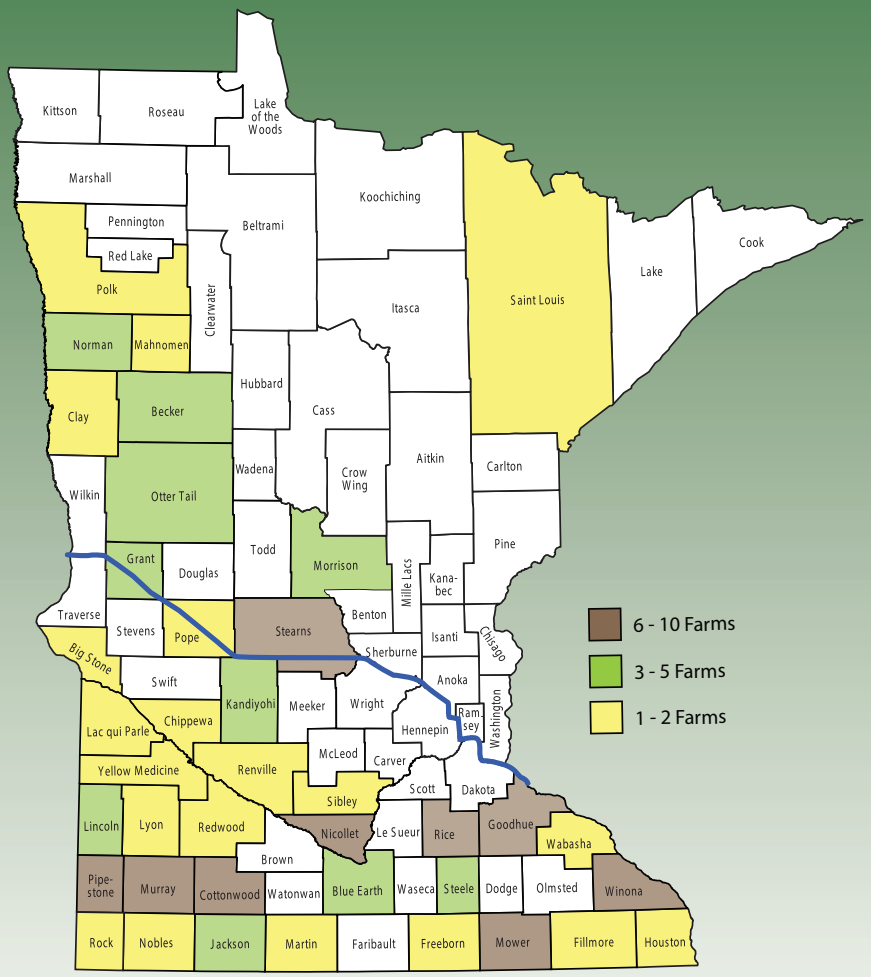
Seed and Chemical costs per acre were similar in both cohorts. The WI Cohort, however, experienced significantly higher Fertilizer costs per acre.

Cover Crop Cohorts	Wisconsin				Minnesota			
	Fields with Corn	*Fields planted to cover crops followed by: Corn*			*Fields with Corn*	*Fields planted to cover crops followed by: Corn*		
	No Cover Crop	Grown after Cover Crop	Cover Crop Enterprise	Combined w Cover Crop	No Cover Crop	Grown after Cover Crop	Cover Crop Enterprise	Combined w Cover Crop
Number of farms	10	7	7	7	96	40	40	40
Yield per acre	203.09	188.25	-	-	176.85	178.13	-	-
Value per bu.	4.39	4.24	-	-	4.77	4.98	-	-
Crop insurance per acre	20.67	-	-	-	86.45	95.02	-	94.80
Other crop income per acre	1.75	0.61	15.85	16.45	5.19	4.11	5.33	9.42
Gross return per acre	1,001.55	815.74	15.85	831.58	945.24	987.02	5.72	992.85
Direct Expenses								
Seeds & Plants	99.25	102.70	19.88	122.58	112.27	106.41	22.54	128.92
Fertilizer	199.64	161.08	-	161.08	200.83	211.39	-	211.52
Crop chemicals	78.03	65.83	3.56	69.39	54.81	56.30	0.55	56.94
Crop insurance	18.28	19.96	-	19.96	33.55	34.96	-	34.96
Fuel & oil	45.65	41.56	11.33	52.89	33.30	27.83	6.34	34.18
Repairs	64.74	60.34	16.46	76.80	60.43	55.79	14.25	69.97
Custom hire	16.10	28.11	6.23	34.34	22.34	23.00	1.98	25.13
Total direct expenses/acre	713.07	697.03	58.19	755.22	742.25	770.19	48.80	819.26
Return over direct exp/acre	288.47	118.71	-42.35	76.36	202.99	216.83	-43.09	173.59
Total overhead exp/acre	159.92	117.19	30.17	147.36	129.49	124.28	25.82	150.10
Total dir & ovhd exp/acre	873.00	814.22	88.36	902.58	871.74	894.47	74.63	969.36
Net return per acre	**128.55**	**1.52**	**-72.52**	**-71.00**	**73.50**	**92.55**	**-68.91**	**23.49**
Government payments	-	-	-	-	-	-	-	-
Net return over lbr & mgt	72.30	-79.71	-94.67	-174.38	21.80	37.02	-82.15	-45.24
Cost of Prod with labor&mgmt	4.04	4.66	-	5.16	4.64	4.77	-	5.23
Machinery cost per acre	198.83	193.97	51.46	245.43	187.53	170.38	34.64	205.10
Land Cost *	189.92	178.06	-	-	202.93	219.69	-	-

* *For owned and rented acres combined, land cost is calculated as the the sum of: Land Rent, Interest, & RE taxes.*

Corn Enterprise

For the 2023 statewide data on the left, comparing the like-colored columns provides that first look at returns & expenses of similar practices in each state. The variability in each, as well as yield & price, shows the importance of long term study.



SOURCES OF DATA

The 141 producers in this report were a part of the State FBM Database. Those producers are located in 40 of Minnesota's 87 counties. Those counties are highlighted on the map. The blue line shows the separation of northern and southern data in this report. 12 producers from Wisconsin also provided data for this report.

Project Partners

Center for Farm Financial Management

Environmental Defense Fund

Morgan Family Foundation

University of Minnesota Extension

Fox Valley Technical College — Knowledge That Works

Western Technical College

Southwest Wisconsin Technical College

North Central Extension Risk Management Education

This report is based upon work supported by USDA/NIFA under Award Number 2021-70027-34694.

Minnesota State
Northern Agricultural Center of Excellence

Keith Olander
Director of AgCentric, the Northern Agricultural Center of Excellence
Keith.Olander@clcmn.edu
(218) 894-5163
agcentric.org

Tina LeBrun
Executive Director of the Southern Agricultural Center of Excellence
Tina.LeBrun@southcentral.edu
(507) 389-7391
www.centerofagriculture.org

Minnesota State
Southern Agricultural Center of Excellence